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**United States Patent** [19]

Vancelette

[11] **Patent Number:** 5,894,320[45] **Date of Patent:** Apr. 13, 1999[54] **MULTI-CHANNEL TELEVISION SYSTEM WITH VIEWER-SELECTABLE VIDEO AND AUDIO**[75] Inventor: **Paul D. Vancelette**, Langhorne, Pa.[73] Assignee: **General Instrument Corporation**,  
Horsham, Pa.[21] Appl. No.: **08/654,901**[22] Filed: **May 29, 1996**[51] Int. Cl.<sup>6</sup> ..... **H04N 7/173**[52] U.S. Cl. .... **348/7; 348/12; 455/4.1; 455/4.2; 455/5.1**[58] **Field of Search** ..... **348/6, 7, 9, 10, 348/12, 13, 556, 563, 385, 386-432; 455/3.1, 4.1, 4.2, 5.1, 6.1, 6.2; H04N 7/173**[56] **References Cited****U.S. PATENT DOCUMENTS**

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*Primary Examiner*—Jeffrey R. Jastrzab*Assistant Examiner*—Luanne P. Din*Attorney, Agent, or Firm*—Barry R. Lipsitz; Ralph F. Hoppin[57] **ABSTRACT**

A television viewer can select among a choice of available camera angles and audio feeds when viewing a sporting event such as a football game without changing the television channel. Audio, video and control data is transmitted in a packetized data stream with control data providing a pre-assigned channel designation (e.g., channel 10 for network X). A set-top terminal receives and processes the data stream according to user-provided commands. The terminal includes software which can be downloaded via the data stream or installed locally. The control data in the data stream is used to provide an on-screen graphical display on the television that allows the user to select the audio and video which correspond to certain areas of the football stadium, for example. Optionally, the viewer may select alternative story lines in a movie or similar program. A default setting provides primary audio and video signals. Alternative audio and video signals are selected by the user and mapped to the channel designator of the primary signal so that the different camera angles and audio feeds may be seen and heard. The viewer is therefore given the opportunity to customize the programming to enhance the entertainment or educational value.

**25 Claims, 8 Drawing Sheets**